

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 08004546
 PUBLICATION DATE : 09-01-96

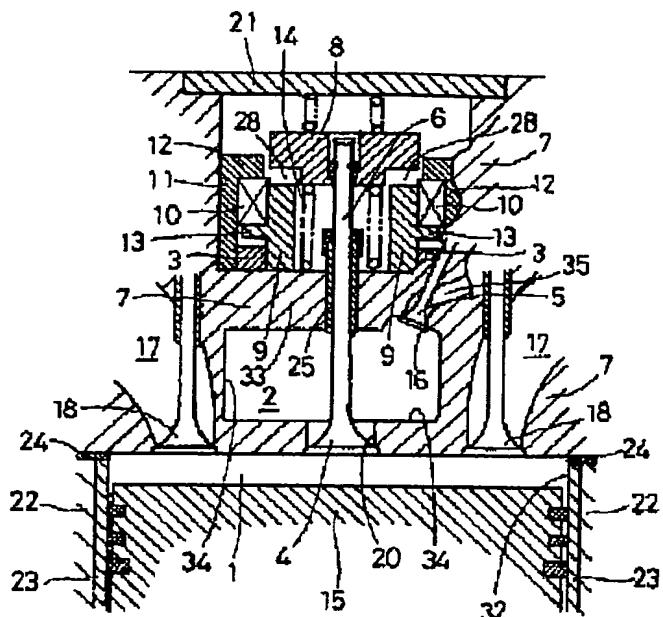
APPLICATION DATE : 17-06-94
 APPLICATION NUMBER : 06158177

APPLICANT : ISUZU CERAMICS KENKYUSHO:KK;

INVENTOR : NAKAJIMA TAKERO;

INT.CL. : F02B 43/00 F01L 9/04 F02B 19/02
 F02D 15/04 F02M 21/02 F16K 31/06

TITLE : AUXILIARY CHAMBER TYPE GAS
 ENGINE HAVING SOLENOID VALVE
 DRIVING DEVICE



ABSTRACT : PURPOSE: To prevent the occurrence of demagnetization of a permanent magnet and to perform smooth operation to open and close a control valve by driving a control valve, located in a communication hole through which a main chamber and an auxiliary chamber are intercommunicated, by a solenoid valve driving device with a built-in permanent magnet.

CONSTITUTION: Main and auxiliary chambers 1 and 2 are intercommunicated through a communication hole 20 in which a control valve 4 is arranged. A solenoid valve driving device to open and close the control valve 4 comprises an armature 8 fixed to a valve stem 6; a spring 14 to energize a spring force on the control valve 4 in the closing direction of the communication hole 20; an inner yoke 9 disposed at an armature 8 with a gap 28 equivalent to the lift of the control valve 4; an electromagnetic winding 10 disposed between inner and outer yokes 9 and 12; and a permanent magnet 3 disposed between the inner and outer yokes 9 and 12. A bypass yoke 13 extending from the inner yoke 9 is located between the inner and outer yokes 9 and 12.

COPYRIGHT: (C)1996,JPO